



## Solid State Devices, Inc.

14701 Firestone Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-4474 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* www.ssdi-power.com

### Designer's Data Sheet

#### FEATURES:

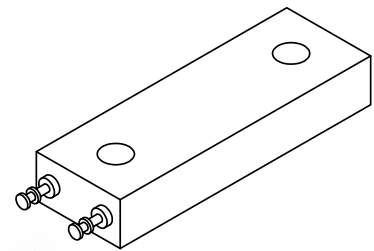
- 79-1000 Volt Bidirectional
- Smaller than 60KS200C Types
- Hermetically Sealed
- Meets all environmental requirements of MIL-PRF-19500
- Custom Configurations Available
- TX and TXV Screening Available

#### APPLICATIONS:

- Protection of Voltage Sensitive Components
- Protection Against Power Interruption
- Lightning Protection

## STA60K79S thru STA60K100S

**60,000 WATTS  
PEAK PULSE POWER  
79 – 1000 VOLTS  
HIGH VOLTAGE BIDIRECTIONAL  
TRANSIENT VOLTAGE SUPPRESSOR**



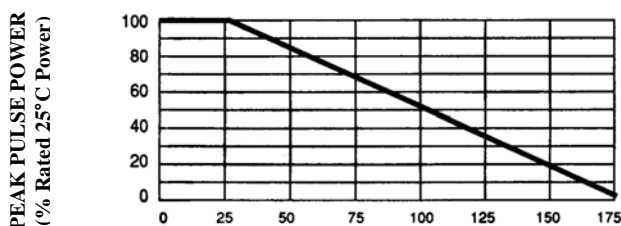
### Maximum Ratings (note 2)

Stand Off Voltage	$V_{RWM}$	56 - 750	Volts
Steady State Power Dissipation	$P_D$	400	Watts
Peak Pulse Power @ 1.0 msec	$P_{PP}$	60,000	Watts
Peak Pulse Power and Steady State Power Derating	SEE GRAPH		
Peak Pulse Power and Pulse Width	SEE GRAPH		
Operating and Storage Temperature	-65°C to +175°C		

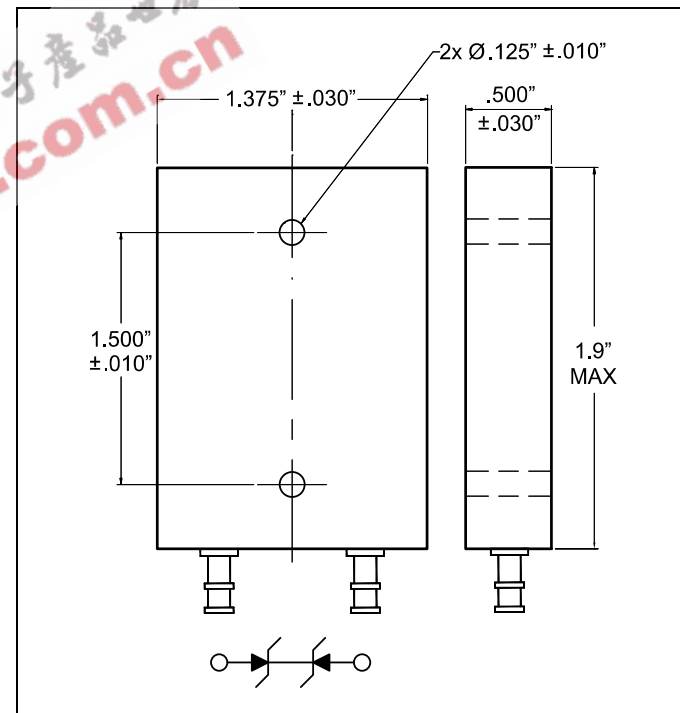
#### Note:

SSDI Transient Suppressors offer standard Breakdown Voltage Tolerances of  $\pm 10\%$  (A) and  $\pm 5\%$  (B). For other Voltage and Voltage Tolerances, contact SSDI's Marketing Department

### PEAK PULSE POWER VS. TEMPERATURE DERATING CURVE



AMBIENT TEMPERATURE (°C)



Package shown is standard configuration. SSDI can custom design your module with terminals that meet your unique design criteria. Additionally, SSDI can package these devices with an irregular footprint or offset mounting positions. This data sheet is meant to serve as an example of SSDI's Transient Protection Module Capabilities. For custom configurations, please contact SSDI's Marketing Department.

**NOTE:** All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: T00014C

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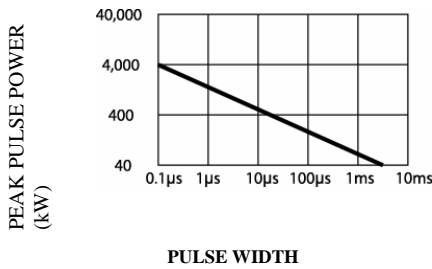
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**STA60K79S thru  
STA60K100S**

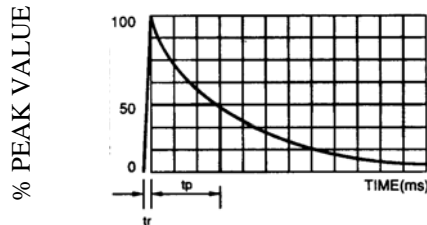
**ELECTRICAL CHARACTERISTICS (note 2)**

Part Number (note 4)	Break Down (note 1)		Max Reverse Stand Off		Peak Pulse Clamping		Maximum Continuous Current	Max Temperature Coefficient
	Nominal Voltage	Test Current	Voltage	Reverse Leakage Current	Voltage (Max)	@ Current Tp=1ms (note 3)		
	V <sub>BR</sub>	@I <sub>BRT</sub>	V <sub>RWM</sub>	I <sub>R</sub> @V <sub>RWM</sub>	V <sub>C</sub>	I <sub>PP</sub>		
	Volts	mA	Volts	µA	Volts	Amps	Amps	%/°C
STA60K79S	79	700	56	6000	145	512	5.00	.03
STA60K89S	89	600	62	4800	150	480	4.60	.03
STA60K98S	98	600	68	160	160	436	4.08	.03
STA60K107S	107	500	75	80	175	400	3.80	.05
STA60K110S	110	500	82	60	185	372	3.44	.05
STA60K127S	127	400	91	40	195	348	3.08	.05
STA60K135S	135	400	100	16	210	316	2.80	.05
STA60K150S	150	300	110	8	230	272	2.40	.05
STA60K167S	167	300	120	8	250	256	2.20	.06
STA60K180S	180	260	130	8	270	228	2.00	.06
STA60K202S	202	260	150	8	300	208	1.76	.06
STA60K226S	226	200	160	8	335	188	1.56	.06
STA60K245S	245	200	180	8	360	172	1.44	.06
STA60K279S	279	200	200	8	400	156	1.24	.06
STA60K305S	305	160	220	8	435	140	1.12	.06
STA60K340S	340	160	240	8	470	128	1.04	.06
STA60K360S	360	120	270	8	520	120	0.96	.06
STA60K390S	390	120	300	8	550	108	0.84	.06
STA60K450S	450	120	330	8	600	100	0.72	.07
STA60K490S	490	100	360	8	650	92	0.70	.07
STA60K510S	510	100	390	8	700	84	0.68	.07
STA60K560S	560	80	430	8	780	76	0.64	.07
STA60K620S	620	80	470	8	870	68	0.60	.08
STA60K680S	680	80	510	8	930	64	0.52	.08
STA60K750S	750	80	560	8	1033	56	0.48	.08
STA60K820S	820	60	620	8	1135	52	0.44	.08
STA60K910S	910	60	680	8	1265	48	0.40	.08
STA60K1000S	1000	48	750	8	1385	44	0.36	.09

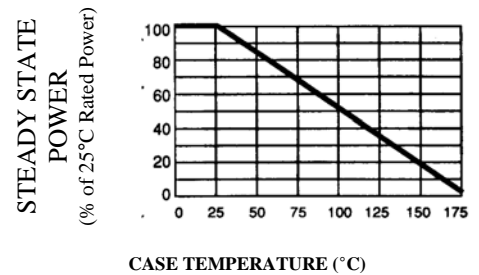
**PEAK PULSE POWER VS. PULSE WIDTH**



**CURRENT PULSE WAVEFORM**



**STEADY STATE POWER DERATING**



For optional high reliability screening or higher zener voltages, consult SSDI MARKETING Department.

**Notes:**

1. All voltages are measured with automated test set using 35 msec test time. Longer or shorter test times will have a corresponding effect on the measured value due to heating effects.
2. Unless specified otherwise, ratings based on 25° C case temperature.
3. Pulse width (tp) is defined as the time from rated peak pulse current IPP to the point where peak pulse current decayed to 50% of rated IPP. (10ms X 1000ms waveform as defined by R.E.A.)
4. Part Number- For 5% Voltage Tolerance, specify "B" in place of "A"